DOCUMENT RESUME

ED 363 816 CG 025 099

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TITLE Measurement Instruments in Child Abuse Research.
SPONS AGENCY National Center on Child Abuse and Neglect (DHHS/OHDS), Washington, D.C.
PUB DATE Feb 93
NOTE 13p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Abuse; Child Neglect; *Evaluation Methods; Research and Development; *Research Methodology; *Sexual Abuse; *Tests; *Test Use

ABSTRACT

This study was conducted to examine the extent to which instruments that meet minimal psychometric standards have been used in child abuse research. Data were obtained by analysis of all 714 papers on child abuse and neglect published in "Child Abuse and Neglect" (1979-1989), "Journal of Interpersonal Violence" (1986-1989), "Journal of Family Violence" (1986-1989) and "Violence and Victims" (1986-1989). The instruments were classified into four categories: (1) maltreatment; (2) effects of maltreatment; (3) risk factors/causes of maltreatment; and (4) other. The 714 articles used 83 different instruments, 24 of which were used in two of more studies. However, 81% of the articles used no instrument (as defined in the study). The least frequently measured phenomenon in the 137 articles that used measures was abuse itself; only 14% of instruments used measured the presence or severity of maltreatment. Forty-one percent of the instruments identified risk factors or causes of maltreatment, 38% were measures of hypothesized effects of abuse, and 7% were measures of the effects of a sexual abuse prevention program. There was one measure of social desirability response tendency. These results suggest that research on child abuse has made minimal use of multi-indicator measures with known reliability and validity. (The discussion section focuses on possible reasons for this and suggestions for remedial steps. A list of the 83 instruments is appended.) (NB)

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MEASUREMENT INSTRUMENTS IN CHILD ABUSE RESEARCH

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ED 363 816

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Revised version of a paper prepared for the National Academy of Sciences, National Research Council, panel on Research on Child Abuse and Neglect, September, 1992. Research for this paper was supported by a grant from the National Center On Child Abuse and Neglect. It is a pleasure to acknowledge the assistance of Barbara Wauchope, Gina DaCruz and Carrie Yodanis in tabulation of the data for this paper.

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Although great progress has been made in research on the causes and consequences of child abuse, lack of appropriate measures for key concepts (or lack of attention to measures where they exist) may have impeded progress (Blalock, 1979, ??, 19??). The same might be said for clinical work. There is, for example, no standard protocol for diagnosing either physical, sexual, or psychological abuse or neglect. The purpose of this paper is to provide information on the extent to which instruments that meet minimal psychometric standards have been used in child abuse research, and to examine the type of variables measured.

SAMPLE

The data were obtained by analysis of all papers on child abuse and neglect published in the following four journals: Child Abuse And Neglect (CAN), 1979-89; Journal of Interpersonal Violence, 1986-89; Journal of Family Violence, 1986-89; and Violence and Victims, 1986-89. Child Abuse And Neglect is the longest established journal devoted to interpersonal violence research, and it is also a publication of the International Society For The Prevention Of Child Abuse and Neglect. The other three journals were selected because, as a result of their focus on interpersonal violence, they include more articles on child abuse than other journals.

A total of 714 articles were reviewed. By far the largest number were published in Child Abuse And Neglect. That follows from the fact that eleven years of that journal were surveyed, compared to only four years for each of the other journals. In addition, it is the only one of the four that is devoted exclusively to child maltreatment. Forty one were published in Journal Of Interpersonal Violence and 39 were published in the Journal Of Family Violence. The smallest number (17) were published in Violence And Victims, which may reflect the fact that the founding editor has done more research on spouse abuse than child abuse.

VARIABLES MEASURED

Use of A Measurement Instrument

For purposes of this paper a "measurement instrument" (which will often be shortened to "measure" or "instrument") was defined as a procedure that combines the values of three or more "items" or "indicators" (such as question or observed or recorded behaviors) to gauge an underlying continuum which can only be partly measured by a single item. There are an almost infinite number of ways to combine items to form a measure, but the most usual procedure is to simply sum the values for each of the items. There are many synonyms for "measurement instrument," including: test, scale, index, multiple indictor index, composite index, scoring or coding system, and latent variable. Each paper was coded 1 if such an instrument was used, or 0 if not.

Multiple indicator scales or tests are almost always superior to single indicator measures for a number of reasons (Straus & Wauchope, 1992) such as the

fact just noted, that most concepts are multifaceted and therefore are only partly measured by a single indicator. Multiple indicators increase the reliability of measurement. The requirement that a measure combine three or more indicators was adopted for this study because reliability is such an important psychometric property and it is almost impossible to achieve a minimum level of reliability with less than three items.

Reliability And Validity

Measures used in research on child maltreatment further differ in the extent to which evidence is reported concerning their reliability and validity. Validity is rarely reported in enough detail to evaluate. Consequently, for purposes of this study, each measure was classified as either one for which some or no evidence of reliability was reported, and the same for validity.

Phenomena Measured

The instruments used in the papers analyzed were classified into one of four categories:

Maltreatment. This category includes measures of the presence or severity of physical, sexual, and psychological abuse, and neglect.*[1] Ironically, these are the least available and least used instruments in child maltreatment research. Maltreatment itself is rarely measured because most of the research uses cases identified by child protective services or other agencies. This is a sound procedure for certain types of research. However, alternative methods of case identification are also needed for epidemiological studies of prevalence and etiology. In addition, measures of maltreatment are needed in because agency identified cases are only a small fraction of maltreated children and there is evidence that clinically identified cases differ in important social and psychological characteristics from cases identified by epidemiological research. To the extent that this is correct, knowledge derived from clinical populations may not apply to cases in the general population who experience the same type of maltreatment (Straus, 1990). There is also a need for measures of child abuse and neglect for use in evaluating the effectiveness of treatment and prevention programs. Standardized instruments can also aid clinical work by detecting conditions that are not disclosed as the presenting problem (Aldarondo and Straus, 1993) or not fully disclosed (Ford, 1990).

Effects of Maltreatment. An important type of research seeks to identify the social and psychological effects on children of maltreatment, such as intelligence, delinquency, depression, and a propensity to mistreat their own children later in life. There is a vast array of such measures, and they have been reasonably well cataloged in numerous compendia (e.g. Buros, 19??; Robinson, et al 1992; Touliatos, Perlmutter, and Straus, 1990). The main issue is not the availability of such measures, but the extent to which psychometrically sound measures have been used.

Risk factors or causes of maltreatment. Measures of these phenomena can be classified into two categories. The most frequently investigated type of

etiological variable are characteristics of individuals, such as the attitudes, knowledge, and personality the parents and the child, both biologically based and learned characteristics. The conceptualization and operationalization of even seemingly obvious characteristics can affect research findings. The is illustrated by the literature on mother's age and physical abuse. The findings are inconsistent, but the inconsistency occurs because some studies used mothers age at the time of the abuse, whereas other studies used mother's age at the time of birth tend to find that the younger the mother, the higher the probability of physical abuse (Connelly and Straus, 1993).

A second group of etiologic variables are social characteristics of community and family, such as urbanization, neighborhood characteristics such as poverty and social disorganization, cultural norms concerning violence, and the availability of kin or other supportive network. Again, the adequacy of measures of even seemingly obvious characteristics can make a difference. For example, what aspect of poverty makes it a risk factor for maltreatment? Is it absolute level of deprivation; the level of deprivation relative to the neighborhood or relative to the nation; or whether (as Wilson, 19?? argues) the concentration of poverty in a neighborhood.

Other. This includes instruments designed to measure knowledge and attitudes about abuse for use in assessing the effectiveness of child abuse prevention programs, and methodological measures such as instruments to determine the extent to which interview or questionnaire responses are distorted by the subject giving responses she or he feels are socially desirable.

FINDINGS

Use of Quantitative Measures

The 714 articles reviewed used a total of 83 different instruments. Twenty four of these instruments were used in two or more studies. Consequently the percentage of articles that reported research using an instrument was higher than this suggests. Nevertheless, 81% of the articles reviewed used no instrument whatsoever (as defined above) to measure a variable. Figure 1 shows that the percentage using an instrument increased during the second half of the 1980's. Articles in Child Abuse and Neglect went from less than 10% in the early 1980's to about 25% in the period 1986-89. The major source of the increase, however, was the three journals that started publishing in 1986. About half the articles on child abuse in these journals used a multi-indicator instrument. Despite this substantial increases, taking all four journals together for the period 1986-89, only 34% used a measurement instrument.

(Figure 1 about here)

Reliability And Validity Of Measures Used

Previous reviews of measures used in research on all aspects of the family found that, even when multi-indicator measures were used, they tended to be ad hoc, with unknown validity and reliability (Straus, 1964; Straus and Brown,

1978). One might therefor expect the same dependence on untested instruments in research on child maltreatment. If one considers the 129 studies that did use a multi-indicator instrument, that did not turn out to be the case in research on child maltreatment. Information on reliability was reported or available for 84.7% of the instruments, and information on validity was available for 80%. There was almost no difference between the four journals in these percentages.

The actual measures used are listed in the Appendix. This shows that almost all are measures of mental ability, personality, or psychopathology. Such measures tend to have been carefully developed and to have had their validity and reliability evaluated, in contrast to measures of family characteristics, which tend to be ad hoc.

Phenomena Measured

The 83 instruments listed in the Appendix were used in a total of 137 articles. As indicated earlier, the least frequently measured phenomenon was abuse itself. Of the 137 uses of a multi-indicator measure, only 14% were instruments to measure the presence or severity of some form of maltreatment. This is because the bulk of research on child abuse is done on cases identified as abused by an agency rather than by the investigator. The percent of articles that relied on agency identification ranged from 65% for Journal of Family Violence, 77% for Child Abuse and Neglect, 80% for Violence and Victims, to 85% for Journal of Interpersonal Violence.

Forty one percent of the instruments were intended to identify risk factors or causes of maltreatment, and 38% were measures of hypothesized effects of having been abused.

Finally, 7% were instruments to measure the effects of a sexual abuse prevention program and there was one measure of social desirability response tendency. Given the "sensitive" nature of a study of child abuse and the presumably high risk of deception by subjects, it is surprising that only one of the 714 studies used a measure that could detect and control for social desirability response sets.

DISCUSSION

The evidence presented in this paper suggests that research on child abuse (as published in journals focusing on child abuse and family violence) has made minimal use of multi-indicator measures with known reliability and validity. Since inadequate measurement can undermine even the best designed study, it is important to identify possible reasons for this and to suggest remedial steps.

Reasons For Limited Use Of Standard Measures

One reason why less than half of the studies reviewed used a multi-indicator measure may be that appropriate tests or scales are not available. The distinction between measures of maltreatment itself, versus measures of

etiological factors and measures of effects on the child, is helpful in assessing this explanation. In the case of measures of child maltreatment itself, despite a few exceptions, few to choose from. However, in respect to measures of etiological factors and of hypothesized effects on children, there are a large number of appropriate and standardized instruments. The number appropriate instruments is probably equivalent to what is available for research on other aspects of families and children. Lack of available measures is therefore only part of the explanation.

Another reason for the relatively infrequent use of standard instruments probably stems from the type cases that are most often studied -- those drawn from child protective services or other agencies. With this source of research subjects there is no need for an instrument to identify abuse cases. However, there is still a need for standardized measures of severity of maltreatment. In addition, measures of maltreatment are needed for epidemiological studies of prevalence. Moreover, instruments to identify cases which are not known to agencies are needed because such cases may not be representative of the even larger number of cases that are not known to agencies (Straus, 1990).

The predominance of agency identified cases in research on child abuse may reflect the clinical training of many child abuse researchers. Not surprisingly, clinically trained persons tend to turn to clinical populations for research subjects. Some also believe that clinical judgement is superior to use of standardized instruments. While this belief is widespread, extensive research comparing clinical assessment with assessment using standardized instruments has found that standardized instruments are superior to classifications made by experienced clinicians (Dawes, Faust and Meehl, 1989).

It is more difficult to suggest reasons for the infrequent use of instruments to measure etiological factors and to measure the effects of abuse on the child. As already indicated, lack of suitable instruments does not seem to be a plausible explanation because there are thousands of such instruments and they can be located through use of standard reference works (e.g. Buros, 19??; 19??; Robinson et al. 1992; Touliatos et al, 1990). Part of the reason may be that it is often difficult or impossible to administer tests to agency cases, especially child protective services -- the main source of cases.

The discipline of investigators may also affect use of standardized measures of etiological and effect variables. This explanation is consistent with the findings on the rapid increase reported in this paper in use of standard instruments. Progress in measurement takes time, so much time in fact that very little of the growth shown in Figure 1 is likely to be due to improved or new instrumentation. The improvement is more likely to be result of changes in the disciplinary training of persons doing child maltreatment research. In the 1960's and early 1970's they were primarily social workers and pediatricians. Neither of these fields puts much emphasis on quantitative measurement of social or psychological phenomena. From the mid seventies to the mid eighties, sociologists became heavily involved in child maltreatment research, but sociology as a discipline also neglects development and use of multi-item measures (Straus and Wauchope, 1992). In recent years psychologists have become the predominant investigators of child maltreatment and they bring to the field a well developed tradition of test development, and probably accounts for almost

all of the growth in use of standardized measures in Figure 1.

Regardless of disciplinary orientation, there are some inherent obstacles to more adequate instrumentation. Most new measures are developed as part of a substantive research project. Some become established measures and some do not. The chances of the instrument being used by others largely depends on whether the investigator provided the information needed to make that possible: a copy of the full instrument, a description of how it was developed, clear scoring instructions, reliability coefficients, and information validity if it is available. This basic information is rarely provided.

A major obstacle to doing the type of psychometric work just described is the fact that most instruments are developed for a specific study and project budgets rarely contain sufficient funds research to establish validity and reliability, construct normative tables, etc. Budgets aside, even if the author carries out the research on these issues, it is difficult or impossible to fit this information into a journal article focused on a substantive issue. The alternative is a separate paper on the theory underling the instrument, the empirical procedures used to develop the instrument, reliability and validity evidence, and norms is ideal in principle, but it runs into the obstacle of limited resources.

Steps To Improve Measurement

To the extent that growth in use of multi-indicator instruments is explained by the change in discipline of child abuse researchers and to the extent that this change continues, it is likely to result in some new instruments to measure hypothesized effects on children that are not measured by existing psychological tests.

Another basis for expecting more use of standard instruments are the recent funding announcements by the National Center on Child Abuse and Neglect which require that research proposals specify use of standard and valid instruments where possible. This is a much needed step, but it can also cause problems if rigidly and unthinkingly applied. Unsophisticated applicants who previously failed to use standard instruments might now choose to use a standard instrument, even though it does not measure the most appropriate construct, whereas a more sophisticated researcher might undertake to develop an appropriate measure.

Although the growth in use of instruments and the NCAN guideline are promising signs, neither are likely to prove sufficient unless there are resources earmarked for measure development. One of the most urgent needs is for instruments to measure the prevalence and severity of various types of child maltreatment, but that is a particularly expensive task. Without earmarked funds, grant review committees tend to favor substantive issues and are not likely to give measurement research a high enough priority.

Another step might be for funding agencies to require an appendix in grant progress reports describing instruments that were developed, just as a growing number of agencies require that data files be made publicly available after a certain interval.

A final suggestion is that funding agencies establish a policy of offering a budget supplement to grantees who have submitted a paper describing a new instrument or a paper on the validity of applying an existing instrument to research on child abuse. This would provide at least some of the needed financial resources, and might help deal with the preference of most investigators to concentrate on the substantive issues of the project. That preference is appropriate for maximizing the a specific research project, but it misses an important opportunity to also contribute to the national research agenda of improving the infra-structure for research on child abuse.

FOOTNOTE

1. This review does not cover medical or physiological diagnostic techniques because these techniques require specialized knowledge.

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Wilson, William ???

1. This review does not cover medical or physiological diagnostic techniques because these techniques require specialized knowledge.

Appendix

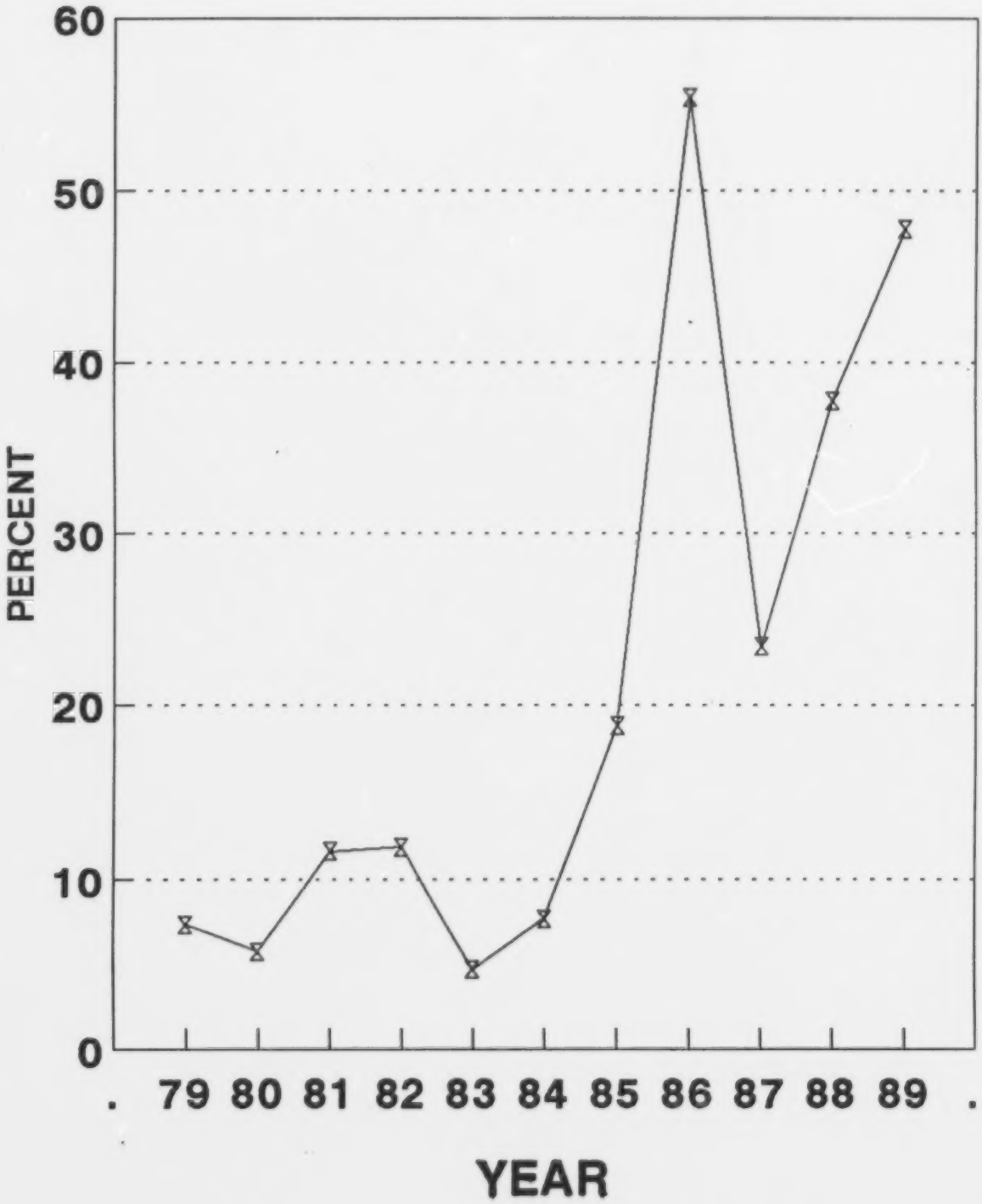
INSTRUMENTS USED, 1979-1989

Instruments Used 2 Or More Times		CAN	Other	Total
Straus	Conflict Tactics Scales	5	6	11
Bayley	Bayley Scales of Infant Development	8	-	8
Wechsler	Wechsler Adult Intelligence Scale	8	-	8
Achenbach	Child Behavior Checklist (CBCL)	-	5	5
Derogatis	Hopkins Symptom Checklist	3	2	5
Rosenberg	Self Esteem Scale	4	-	4
Schaefer	Parental Attitude Research Instrument	4	-	4
Bavolek	Adult-Adolescent Parenting Inventory (AAPI)	3	1	4
Brazelton	Brazelton Neonatal Behavioral Assessment	3	-	3
Dunn	Peabody Picture Vocabulary Test	3	-	3
Hathaway	Minnesota Multiphasic Personality Inventory	3	-	3
Hollingshead	Two Factor Index of Social Position	2	1	3
Piers	Piers-Harris Children's Self Concept Scale	3	-	3
Dembo	Physical Abuse Index	-	2	2
Finkelhor	Childhood Sexual Experiences Questionnaire	-	2	2
Fitts	Tennessee Self-Concept Scale	-	2	2
Koppitz	Human Figure Drawing Scoring System	2	-	2
Schmitt	Family Crisis Checklist	2	-	2
Selzer	Michigan Alcoholism Screening Test (MAST)	-	2	2
Spielberger	State-Trait Anxiety Inventory for Children (STAIC)	-	2	2

Instruments Used Once				
Behar	Preschool Behavior Questionnaire (PBQ)	1	-	1
Borke	Interpersonal Perception Test	1	-	1
Briere	Trauma Symptom Checklist	-	1	1
Burt	Acceptance of Interpersonal Violence Scale (AIV)	1	-	1
Buss	Hostility and Guilt Inventory	1	-	1
Caldwell	Home Observation for Measurement of the Environment (HOME)	1	-	1
Carey	Infant Temperament Questionnaire	-	1	1
Cicirelli	The Purdue Self Concept Scale for Preschool Children	-	1	1
Cox	Rating Scale for Psychosomatic Problems	-	1	1
Crandall	Intellectual Achievement Responsibility	1	-	1
Crowne	Social Desirability Scale	-	1	1
Dalgleish	Marital Relations Index	1	-	1
Dawson	Means-End Problem Solving Assessment	-	1	1
Deblinger	Post-Traumatic Stress Disorder Symptom Checklist	1	-	1
DeJong	Sexual Abuse Criteria	1	-	1
Donaldson	Responses to Childhood Incest Questionnaire (RCIQ)	1	-	1
Duquette	Process Measures for Child Representation	1	-	1
Eysenck	Maudsley Personality Inventory	1	-	1
Gabinet	Parenting Behavior Scale	1	-	1
Griffiths	Griffiths Mental Development Scale	1	-	1
Hansen	Parental Problem-Solving Measure (PPSM)	-	1	1
Harries	Urban Pathology Index	-	1	1
Heath	Physical Abuse Index	-	1	1
Helmreich	Texas Social Behavior Inventory (TSBI) Short Form	1	-	1
Hoffmeister	Self-Esteem Questionnaire (SEQ-3)	1	-	1
Horowitz	Impact of Event Scale	-	1	1
Hudson	Index of Self-Esteem (ISE)	-	1	1
Johnson	Child Sexual Behavior Checklist	1	-	1
Kasprin-Burrelli	Parent Interaction Scale	1	-	1
Kleemeier	Teacher Knowledge Scale	1	-	1
Knight	Massachusetts Treatment Center Child Molester Typology (MTC-CM33)	-	1	1
Kolko	Knowledge of Sexual Abuse Programs Skills Scales	-	1	1
Kolko	Sexual Abuse Symptom Checklist (SASC)	1	-	1
Koss	Sexual Experiences Survey	-	1	1
Kovacs	Children's Depression Inventory	-	1	1
Lanyon	Psychological Screening Inventory (PSI)	-	1	1
Larsen	Client Satisfaction Questionnaire	1	-	1
Lujan	Alcohol Abuse History Checklist	1	-	1
McCubbin	Family Inventory of Life Event and Changes (FILE)	-	1	1

McNair	Profile of Mood States	1	-	1
Miller	Louisville Behavior Checklist (LBCL)	1	-	1
Milner	Child Abuse Potential Inventory (CAP)	-	1	1
Milner	Ego-Strength Scale	-	1	1
Moos	Family Environment Scale (FES)	1	-	1
Paitich	Sex Offenders Use of Pornography	-	1	1
Pascoe	Maternal Social Support Index (MSSI)	1	-	1
Quinsey	Arousal by Violence Sex Measured by Plethysmograph	-	1	1
Raven	Progressive Matrices	1	-	1
Reynolds	Revised Children's Manifest Anxiety Scale (RCMAS)	-	1	1
Ringwald	Personality Assessment Questionnaire (PAQ)	1	-	1
Ringwalt	Child's Report of Parental Behavior Inventory (CRPBI)	-	1	1
Rorschach	Rorschach Inkblot Test	1	-	1
Rosenbaum	Witnessing Family Violence Scale	-	1	1
Russell	Revised UCLA Loneliness Scale (UCLA)	-	1	1
Saunders	Attitude Toward Sexual Abuse Index	1	-	1
Shaffer	Children's Global Assessment Scale (CGAS)	1	-	1
Sparrow	Vineland Adaptive Behavior Scale (VABS - revised)	1	-	1
Stillwell	Sexual Abuse Prevention Training Test	-	1	1
Yarmey	Child Response to Danger Competency Scales	1	-	1

Articles Using A Quantitative Measure (Ch Ab & Neg 79-89 + 3 Others 86-89)



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